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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tony N. Aram

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7590

09/01/2006

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EXAMINER

HOFFMAN, MARY C

ART UNIT

PAPER NUMBER

3733

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/765,950

Applicant(s)

ARAM, TONY N.

Examiner

Mary Hoffman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 16-18, 22-24, 26-33, 35-36, 38, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Clarenz (German Patent DE 32 44 680 A1).

Clarenz discloses a method for stabilizing and facilitating recovery of injured bone within a living body, the method comprising providing a surgical instrument (FIGS. 1-3) comprising a flexible cable (see FIG. 1, ref. #2) and a plurality of permanent bone-contacting enlargements (ref. #18), the flexible cable having a first end, a second end, and a length sufficient to wrap around the injured bone, the bone-contacting enlargements being fixedly attached to the flexible cable between the first and second ends and being spaced apart from one another to provide linking cable portions alternating with the spaced bone-contacting enlargements; passing the surgical instrument about the injured bone to contact the bone-contacting enlargements and the injured bone with one another, the bone-contacting enlargements positioning the linking cable portions in spaced relationship to the injured bone, tensioning (by pulling through ref. #3) the flexible cable about a region of the injured bone to constrict the region while the bone-contacting enlargements retain the linking cable portions in spaced

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relationship to the injured bone for permitting vascular communication across the constricted region of the injured bone; and securing the surgical instrument about the injured bone. The flexible cable is axially inelastic. The bone-contacting enlargements are obtuse, i.e. blunt and non-pointed (ref. #18). The bone-contacting enlargements comprise beads (ref. #18). The bone-contacting enlargements have peripheries circumferentially surrounding the flexible cable. The bone-contacting enlargements each have a respective axial length smaller in dimension than respective axial lengths of adjacent ones of the linking cable portions. The method further comprises engaging a tensioning device (ref. #3) to the second end portion and tensioning the flexible cable about a region of injured bone to constrict the region while the bone-contacting enlargements retain the linking cable portions in a spaced relationship to the injured bone for permitting vascular communication. The method includes providing a connecting device (ref. #3) and securing surgical instrument about the injured bone via the connecting device. The method further comprises crimping the first end of the flexible cable to a truncated cable portion (portion of ref. #7) of the connecting device, and feeding the second end of the flexible cable through a receiving region (portion of ref. #7) of the connecting device, and the connecting device comprising a crimpable body portion for receiving and crimping with the first end of the flexible cable. The step of passing further includes feeding the flexible cable, with the bone-contacting enlargements being fixedly attached thereto, about the injured bone to arrange the flexible cable in a loop and to encircle the bone-contacting enlargements about the injured bone (see FIG. 3).

Claims 13-14, 16, 18, 21-26, 28-33, 36-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Gundolf (U.S Patent 5,571,105).

Gundolf discloses a method for stabilizing and facilitating recovery of injured bone within a living body, the method comprising providing a surgical instrument comprising a flexible cable (see FIG. 1, ref. #10) [definition for "cable" found in American Heritage Dictionary, "b. something that resembles such steel or fiber rope"] and a plurality of permanent bone-contacting enlargements (ref. #27, 22), the flexible cable having a first end, a second end, and a length sufficient to wrap around the injured bone, the bone-contacting enlargements being fixedly attached to the flexible cable between the first and second ends and being spaced apart from one another to provide linking cable portions alternating with the spaced bone-contacting enlargements; passing the surgical instrument about the injured bone to contact the bone-contacting enlargements and the injured bone with one another (col. 5, lines 25-35), the bone-contacting enlargements positioning the linking cable portions in spaced relationship to the injured bone, tensioning the flexible cable about a region of the injured bone to constrict the region while the bone-contacting enlargements retain the linking cable portions in spaced relationship to the injured bone for permitting vascular communication across the constricted region of the injured bone; and securing the surgical instrument about the injured bone. The flexible cable is formed of a metal (col. 4, lines 49-51). The flexible cable is axially inelastic. The bone-contacting enlargements comprise beads (ref. #27, 22). The bone-contacting enlargements comprise a metal (col. 5, lines 38-41). The bone-contacting enlargements have peripheries

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circumferentially surrounding the flexible cable. The bone-contacting enlargements each have a respective axial length smaller in dimension than respective axial lengths of adjacent ones of the linking cable portions. The method further comprises engaging a tensioning device (ref. #12) to the second end portion and tensioning the flexible cable about a region of injured bone to constrict the region while the bone-contacting enlargements retain the linking cable portions in a spaced relationship to the injured bone for permitting vascular communication. The method includes providing a connecting device (ref. #12) and securing surgical instrument about the injured bone via the connecting device. The method further comprises crimping the first end of the flexible cable to a truncated cable portion of the connecting device (see FIGS. 2a and 4a), and feeding the second end of the flexible cable through a receiving region of the connecting device, and the connecting device comprising a crimpable body portion for receiving and crimping with the first end of the flexible cable. The step of passing further includes feeding the flexible cable, with the bone-contacting enlargements being fixedly attached thereto, about the injured bone to arrange the flexible cable in a loop and to encircle the bone-contacting enlargements about the injured bone.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 15, 19, 20, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarenz (German Patent DE 32 44 680 A1)

Since an English translation of German Patent DE 32 44 680 A1 to Clarenz cited above was not available at the time of examination of Applicant's application, it is not clear if the Clarenz patent discloses the following:

The flexible cable is formed of a metal, i.e. stainless steel or cobalt chrome, and the bone-contacting enlargements comprise metal or a high molecular weight polymer, i.e. polyethylene.

In any case, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Clarenz with the flexible cable formed of a metal, i.e. stainless steel or cobalt chrome, and the bone-contacting enlargements comprising metal or a high molecular weight polymer, i.e. polyethylene, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 15 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundolf (U.S Patent 5,571,105).

Gundolf discloses the claimed invention except for the cable being made of stainless steel or cobalt chrome, and the bone-contacting enlargements comprising a high molecular weight polymer, specifically polyethylene. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Gundolf with the cable being made of stainless steel or cobalt chrome, and the

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bone-contacting enlargements comprising a high molecular weight polymer, specifically polyethylene, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 13-23, 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderwalle (U.S. Patent 5,993,452) in view of Florio (U.S. Patent 3,469,573).

Vanderwalle discloses embodiments of a method for stabilizing and facilitating recovery of injured bone within a living body, the method comprising providing a surgical instrument (FIG. 1, ref. #7) comprising a flexible cable (see FIG. 1, ref. #18) and a plurality of bone-contacting enlargements (FIG. 1, ref. #28), the flexible cable having a first end, a second end, and a length sufficient to wrap around the injured bone, the bone-contacting enlargements being fixedly attached to the flexible cable between the first and second ends and being spaced apart from one another to provide linking cable portions alternating with the spaced bone-contacting enlargements; passing the surgical instrument about the injured bone to contact the bone-contacting enlargements and the injured bone with one another, the bone-contacting enlargements positioning the linking cable portions in spaced relationship to the injured bone, tensioning the flexible cable about a region of the injured bone to constrict the region while the bone-contacting enlargements retain the linking cable portions in spaced relationship to the injured bone for permitting vascular communication across the constricted region of the injured bone; and securing surgical instrument about the injured bone. The flexible cable is formed of a metal (col. 2, last paragraph). The flexible cable is formed of a metal selected from



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stainless steel and cobalt chrome (col. 2, last paragraph). The flexible cable is axially inelastic. The bone-contacting enlargements are obtuse, i.e. blunt and non-pointed. The bone-contacting enlargements comprise beads. The bone-contacting enlargements have peripheries circumferentially surrounding the flexible cable. The bone-contacting enlargements each have a respective axial length smaller in dimension than respective axial lengths of adjacent ones of the linking cable portions (see FIG. 6). The method includes providing a connecting device (FIG. 1, ref. #10, FIG. 6, ref. #66) and securing surgical instrument about the injured bone via the connecting device. The step of passing further includes feeding the flexible cable, with the bone-contacting enlargements being fixedly attached thereto, about the injured bone to arrange the flexible cable in a loop and to encircle the bone-contacting enlargements about the injured bone (see FIG. 1, FIG. 6). The step of passing further includes feeding the flexible cable, with the bone-contacting enlargements being fixedly attached thereto, about the injured bone a plurality of times to arrange the flexible cable in a coil and to position the bone-contacting enlargements about the bone (FIG. 11).

Vanderwalle discloses the claimed invention except for the bone-contacting enlargements being permanent and comprising a metal or a high molecular weight polymer, specifically polyethylene.

Florio discloses using bone-contacting enlargements that are permanent in order to improve the growth and development of fibrous tissue, blood vessels, etc. to grow through the device (col. 2, first paragraph+).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Vanderwalle with the bone-contacting enlargements being permanent in view of Florio to improve the growth and development of fibrous tissue, blood vessels, etc. to grow through the device. It would have further been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Vanderwalle in view of Florio including the bone-contacting enlargements comprising metal or a high molecular weight polymer, specifically polyethylene, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 24-30 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderwalle (U.S. Patent 5,993,452) in view of Florio (U.S. Patent 3,469,573) further in view of Kipela et al. (U.S. Patent No. 6,595,994).

Vanderwalle in view of Florio discloses the claimed invention except for the method further comprising engaging a tensioning device to the second end portion and tensioning the flexible cable about a region of injured bone to constrict the region.

Kipela et al. (U.S. Patent No. 6,595,994) disclose a method comprising engaging a tensioning device to the second end portion and tensioning the flexible cable about a region of injured bone to constrict the region when there is a need to penetrate into small deep wounds and incisions for tensioning cables deeply mounted in the body (col. 1, lines 20-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Vanderwalle in view of Florio including the tensioning device in view of Kipela et al. (U.S. Patent No. 6,595,994) when there is a need to penetrate into small deep wounds and incisions for tensioning cables deeply mounted in the body

Claims 31-35 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderwalle (U.S. Patent 5,993,452) in view of Florio (U.S. Patent 3,469,573) further in view of Kipela et al. (U.S. Patent No. 5,414,658).

Vanderwalle in view of Florio discloses the claimed invention except for the method further comprising a connecting device that can be used in crimping the first end of the flexible cable to a truncated cable portion of the connecting device, and feeding the second end of the flexible cable through a receiving region of the connecting device, and the connecting device comprising a crimpable body portion for receiving and crimping with the first end of the flexible cable; and the connecting device comprising a first screw for securing the first end of the flexible cable to the connecting device, and a second screw for securing the second end of the flexible cable to the connecting device.

Kipela et al. (U.S. Patent No. 5,414,658) disclose a method for using a connecting device (see FIGS. 1-3) comprising a connecting device used in crimping the first end of the flexible cable to a truncated cable portion of the connecting device, and feeding the second end of the flexible cable through a receiving region of the connecting device, and the connecting device comprising a crimpable body portion for receiving

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and crimping with the first end of the flexible cable; and the connecting device comprising a first screw for securing the first end of the flexible cable to the connecting device, and a second screw for securing the second end of the flexible cable to the connecting device which is to be used in lieu of the prior art to provide an essentially foolproof technique of cable securance (col. 1, lines 56-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the device of Vanderwalle in view of Florio including using the a connecting device and method of crimping the first end of the flexible cable to a truncated cable portion of the connecting device, and feeding the second end of the flexible cable through a receiving region of the connecting device, and the connecting device comprising a crimpable body portion for receiving and crimping with the first end of the flexible cable; and the connecting device comprising a first screw for securing the first end of the flexible cable to the connecting device, and a second screw for securing the second end of the flexible cable to the connecting device in view of Kipela et al. (U.S. Patent No. 5,414,658) to provide an essentially foolproof technique of cable securance.

### ***Response to Arguments***

Applicant's arguments see page 11, last paragraph, and page 12, first paragraph, filed 7/14/2006, with respect to claims 13-34 have been fully considered and are persuasive. The rejection of claims 13-34 has been withdrawn.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Hoffman whose telephone number is 571-272-5566. The examiner can normally be reached on Monday-Friday 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo C. Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCH



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